FINISHING STEERS FOR MARKET

IN NORTH-WESTERN SASKATCHEWAN

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Straw shed used in experiments for wintering fattening steers.—Experimental Station, Scott, Sask.

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FINISHING STEERS FOR MARKET

REASONS WHY STEER FEEDING SHOULD BE MADE A BUSINESS ON THE FARMS IN NORTHWESTERN SASKATCHEWAN

First. Farmers in northwestern Saskatchewan are close to a main source of supply of good feeder steers and there is an abundance of feed most years.

Second. This line of business will provide winter employment for surplus labour.

Third. It can be made a profitable business where such conditions as cheap feeders, cheap feed, and a plentiful supply of labour prevail. This is providing the operator knows how to feed stock and has a fair knowledge of business methods.

Fourth. Finishing steers during the winter months will increase the amount of fertilizer that can be returned to the land to increase yields from crops.

Some of the Steers fed winter 1920-21—Experimental Station, Scott, Sask.

Fifth. Feeding live stock will permit diversifying the farm crops grown, since such crops as hay, coarse grains, etc., can be marketed through the live stock. This will make possible the introduction of suitable crop rotations.

Sixth. Finishing steers for market, if followed up by a large number of farmers, will raise the standard of farming.

Seventh. Finishing steers for market is one of the most attractive side lines that any farmer can introduce into grain farming in northwestern Saskatchewan.

PROFITS FROM FINISHING STEERS

In order to determine the profits from finishing steers for market, experiments were started on the Dominion Experimental Station at Scott, Sask., in the autumn of 1916, and every year since, with the exception of one, at least one carload have been fed.

Records have been kept of cost of feeds and in the following table the purchase price and the cost of feed have been totalled and deducted from the selling price to determine the profit or loss per season. Labour and interest on investment are not included, but these are usually counter-balanced by other items such as manure and utilizing straw and other materials which would be wasted if not fed.

It has been found necessary to purchase practically all the feed for feeding steers and it has been charged at the price prevailing at time of purchase.

The steers used in three seasons in the experiments were purchased locally. In the years 1919-20 and 1920-21 the steers were purchased through a commission firm in Edmonton.

PROFITS FROM FINISHING STEERS BY WINTER FATTENING.

Year.	Number fed.	Cost including feed.	Selling price.	Total Profit or loss.	Profit or loss per Animal.
		$ cts.	$ cts.	$ cts.	$ cts.
1916–17	38	3,158 77	4,114 38	955 61	25 15
1917–18	19	1,897 74	2,235 54	337 80	17 77
1918–19	None fed				
1919–20	20	2,623 83	3,008 88	385 05	19 25
1920–21	20	2,009 86	1,773 71	236 15	— 11 80
1921–22	24	1,191 37	1,706 18	514 81	25 74

The average profit per steer amounted to $16.17 for the 121 animals fed. The loss sustained in the year 1920-21 was due to having to write off the depreciation in values from war prices to prices prevailing during normal times.

The conclusion reached is that farmers would be well advised to finish their steers during the winter months rather than sell at low prices in the fall. But as in most lines of business, the feeder should be prepared to stand an off-year occasionally.

MARGINS BETWEEN FALL AND SPRING PRICES

While the gain in weight in the animals is an important consideration—for the most part the feeder must depend on the spread between autumn and spring prices for the profits from the venture.

The following table gives the margins that have existed between the purchase and the selling price for the steers used in the experiments at Scott:—

SPREAD IN PRICES BETWEEN AUTUMN AND SPRING IN STEERS PURCHASED FOR THE FEEDING EXPERIMENTS AT SCOTT.

Year.	Purchase price Autumn. per cwt.	Selling per cwt.	Spread. per cwt.
	$ cts.	$ cts.	$ cts.
1916–17	6 14	9 40	3 26
1917–18	7 00	10 35	3 35
1919–20	9 03	12 05	3 02
1920–21	7 94	7 66	loss 28
1921–22	3 44	6 23	2 79
Average spread in prices for five years			2 42

The prices quoted are f.o.b. Scott in every instance.

SHELTERS FOR WINTER FATTENING STEERS

One of the first points that the average farmer has to consider is that of buildings for housing the steers during the winter feeding period.

The experiments on this Station show that expensive stables are not necessary. During the first two years, steer feeding was carried on in a straw shed and in a close board corral covered over at one end. The following table gives the number of pounds of grain required for one pound of gain:—

POUNDS OF GRAIN FOR ONE POUND OF GAIN.

Year fed.	In straw shed.	In corral.
1916–17	6·2 lbs. grain	7·9 lbs.
1917–18	10·09 lbs. grain	11·5 lbs.

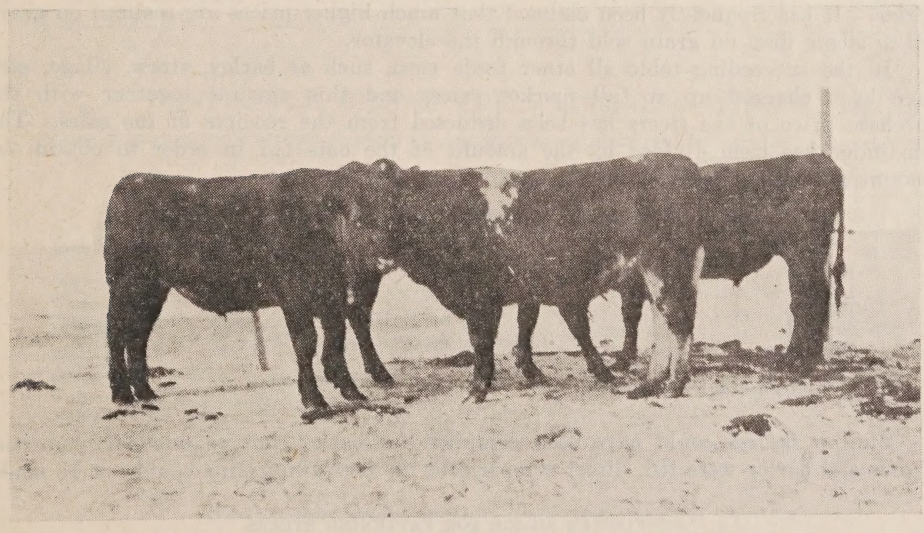
Average decrease in grain requirements by feeding under shelter amounted to 1·3 pounds per pound of gain.

During the years 1919-20 and 1920-21 the steers were all fed in a lumber shed having only a single ply of lumber on the walls and roof. It was found that the average of 6·9 pounds of grain was required. During the winter of 1921-22 the steers were fed in a much warmer shelter where 7·4 pounds of grain was required to produce one pound of gain.

While some variation in gains in different years is to be expected, due to difference in quality of the feed and feeding qualities of the steers, the results indicate that if the steers are protected from the wind and snowstorms, sufficient protection for economical gains has been provided.

FEEDS FOR FINISHING STEERS

Another point to be considered by the prospective steer feeder is that of suitable feeds. Crushed oats and barley will make up the main part of the grain ration fed



Steers not fed Silage.—Experimental Station, Scott, Sask.

in northwestern Saskatchewan. Standard screenings ground fine have proven to give good gains at Scott when mixed with oat chop.

No attempt has been made at this Station to determine the advisability of using oil cake or other higher priced feeds. For roughage, straw has been used principally, for the reason that native hay has become rather scarce in this district and up to the present very little cultivated hay has been grown. Sunflower ensilage has also been tested out.

Steers fed Silage.—Experimental Station, Scott, Sask.

RETURN VALUES FROM OATS FED TO FATTEN STEERS

Steer feeding has been recommended as a profitable method of marketing coarse grains. It has frequently been claimed that much higher prices are realized on grain fed to steers than on grain sold through the elevator.

In the succeeding table all other feeds used, such as barley, straw, silage, etc., have been charged up at full market prices and this amount together with the purchase price of the steers has been deducted from the receipts of the sales. The remainder has been divided by the amount of the oats fed in order to obtain the amount per bushel realized for the oats.

VALUE OF OATS WHEN MARKETED THROUGH FEEDING TO STEERS

Years	Return per bushel
1916-17	$1 12
1917-18	1 31
1919-20	1 87
1920-21	06 loss
1921-22	1 11
Average for 5 years	$1 07

Similar figures could have been compiled for barley, but as unequal quantities of oats and barley were fed, direct comparisons of these two grains could not be made.

SUNFLOWER SILAGE FOR FATTENING STEERS

Experiments were started in the autumn of 1919 to determine the value of sunflower silage for feeding to fattening steers. The plan followed has been to feed a ration of straw and grain to one lot of steers and to another lot, fed under the

same conditions, the silage was given in addition to the regular feed. Two years' results are given in the following tables, since in both these seasons the steers were sold immediately at the conclusion of the silage feeding experiment.

SUNFLOWER SILAGE FOR FATTENING STEERS, 1919-20

	2-Year old Steers.	
	Silage fed.	Straw fed.
	$ cts.	$ cts.
Number of steers in lot	10	10
Original cost	1,029 00	1,016 00
Cost of all feed excepting silage	249 92	261 92
Original cost and cost of feed except silage	1,278 92	1,277 92
Selling price	1,587 10	1,421 10
Profit over all feed costs except silage	308 18	143 20
Value of 11·06 tons silage	164 98	
Value of 1 ton silage	14 91	

SUNFLOWER SILAGE FOR FATTENING STEERS, 1921-22

	2-Year old Steers.	
	Silage fed.	Straw fed.
	$ cts.	$ cts.
Number of steers in lot	6	6
Cost of steers in autumn	254 76	259 80
Cost of feed excluding silage	94 96	99 13
Total cost at conclusion of experiment silage not included	349 72	358 93
Selling price	514 92	467 16
Profit over feed other than silage	165 20	108 23
Value of 6·13 tons silage	56 97	
Value of 1 ton silage	9 29	

SUNFLOWER SILAGE FOR FATTENING STEERS, 1921-22

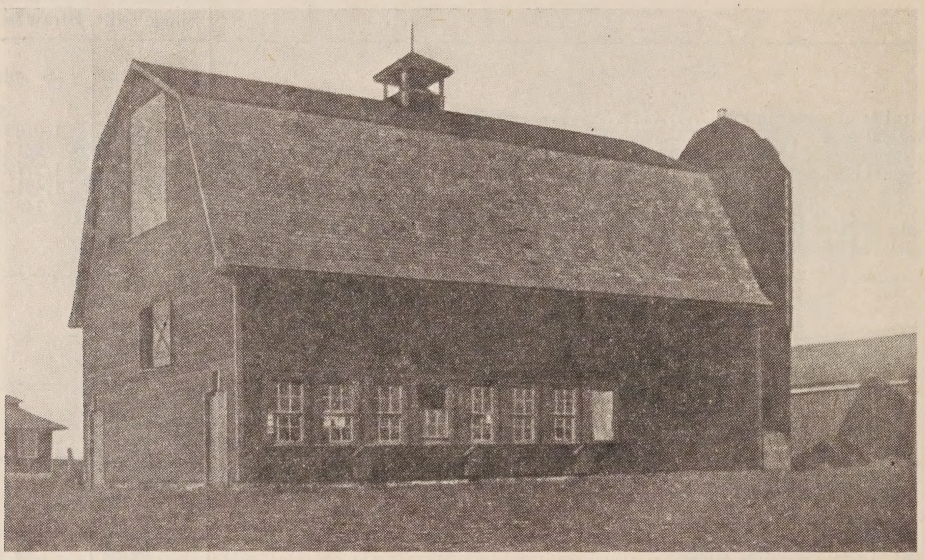
	Yearling steers.	
	Silage fed.	Straw fed.
	$ cts.	$ cts.
Number of steers in lot	6	6
Original cost of steers	137 52	136 80
Cost of feed excluding silage	81 00	78 07
Total cost at conclusion of experiment silage not included	218 52	214 87
Selling price	383 64	342 12
Profit over feed cost except silage	165 12	127 25
Value of 6·13 tons silage	37 87	
Value of 1 ton silage	6 16	

CONCLUSIONS FROM FEEDING SUNFLOWER SILAGE EXPERIMENTS

From the feeder's standpoint, the value of sunflower silage in fattening steers is to keep the animals in good, thrifty condition by providing succulence to the rations which, in the West, are particularly dry. In the second place the silage-fed

steers have invariably been found to be more uniformly finished than steers fed straw and grain only. This has been proven in both years. In the lot of yearling steers fed silage in 1921-22 all sold for the same figure per pound, while in the straw-fed lot, four of the steers were sold at 80 cents per hundred less, while the remaining two brought the same price as the silage-fed animals.

It must be pointed out, however, that silage is not absolutely necessary to fatten steers since those fed on straw alone made good gains, and both the increase in weight



Barn erected autumn 1921. Cost $1,500. Profits from steer feeding experiments $514 during winter months, thus paying for one-third cost of barn the first season. Experimental Station, Scott, Sask.

and increase in selling price were required to bring the value of the silage fed up to $6.67 per ton, which is very little over cost price, when shrinkage in the silo is taken into consideration.

YEARLINGS VS. TWO-YEAR-OLD STEERS AS FEEDERS

During the past winter an experiment was conducted to determine the advisability of finishing steers a year earlier than has been customary in the past. Twelve steers approximately 18 months old and an equal number about 30 months old were purchased from local farmers in the autumn. The steers were all Shorthorn grades. Each lot was divided into two groups of six each of yearlings and two-year-olds. Straw and grain were fed, and one lot each of the yearlings and two-year-olds received silage in addition.

VALUATION OF FEEDS FOR WINTER FEEDING STEERS, 1921-22

Oats	.01c. per lb.
Barley	.56c. per lb.
Silage	$5 00 per ton
Straw (oats and wheat)	1 00 per ton
Hay (prairie wool)	6 00 per ton
Pasture	1 50 per head per month

YEARLING STEERS VS. TWO-YEAR OLDS.

	Yearlings.		Two-year Olds.	
	Ensilage fed.	Straw fed.	Ensilage fed.	Straw fed.
Number of steers in lot	6	6	6	6
First gross wieght	lbs 4585	4560	6370	6495
First average weight	" 764	760	1061	1082
Finished gross weight	" 6090	5920	7820	7600
Finished average weight	" 1015	986	1303	1266
Total gain	" 1505	1360	1450	1105
Averge gain per steer	" 251	226	241	184
Average daily gain per steer (159 days)	" 1·5	1·4	1·5	1·1
Quantity of oats consumed	" 4958	4958	6191	6191
Quantity of oat straw consumed	" 6666	7332	7332	8000
Quantity of barley consumed	" 2266	2266	2973	2973
Quantity of wheat straw consumed	" 3333	3666	3666	4000
Quantity of pasture consumed	$ 3·00	$ 3 00	$ 3 00	$ 3 00
Quantity of hay consumed at $6.00 per ton	lbs. 375	375	375	375
Quantity of silage consumed	" 12,260	.....	12,260	.....
Gross cost of feed, and pasture	$ 111 65	$ 78 07	$ 125 61	$ 99 13
Average cost of feed per steer	$ 18 60	$ 13 01	$ 20 93	$ 16 52
Cost of 1 lb. of gain	7·4c.	5·7c.	8·6c.	8·9c
Average value of steers in autumn	$ 22 92	$ 22 80	$ 42 46	$ 43 30
Average value of steers at conclusion of experiment	$ 41 53	$ 35 81	$ 63 40	$ 59 82
Average selling price per steer	$ 63 94	$ 57 02	$ 85 82	$ 77 86
Average increase in value	$ 41 02	$ 34 22	$ 43 36	$ 34 56
Average profit per steer	$ 22 41	21 22	$ 22 42	$ 18 04
Value of silage per ton	$ 6 67	.....	$ 9 29	.....
Grain required per lb. gain	lbs. 4·8	5·2	6·3	8·2..

The yearling steers were bought for three cents per pound and the two-year-olds at four cents. The average selling price per pound for the yearlings was 6·04 cents and for the two-year-olds 6·36 cents per pound. The yearlings gained an average of 238 pounds per steer and the two-year-olds an average of 212 pounds per steer.

COMPARISON OF GAINS MADE BY HORNLESS AND DEHORNED STEERS

In the experiment to compare gains made by steers purchased hornless and steers just dehorned, unequal numbers of steers were used, but the experiment has been followed up for several years. The hornless steers were fed in the same lots as the animals just dehorned.

In the following tables the number of steers fed, the gain per animal for the first month, and the total gain for the entire feeding period have been included.

STEERS DEHORNED JUST BEFORE GOING IN FEED LOT.

Lot.	No. of steers in lot	Gain per steer first month	Gain per steer during feeding period.
		lbs.	lbs.
1	6	56	150
2	5	43	102
3	8	40	240
4	7	56	259
5	5	12	221
6	4	11 loss	146
Total	35	196	1118
Average gain per steer	32·6		186·3

HORNLESS STEERS.

Lot.	No. of steers in lot	Gain per steer first month.	Gain per steer during feeding period.
	lbs.	lbs.	lbs.
1	4	54	135
2	5	56	117
3	2	72	270
4	3	52	260
5	1	75	345
6	2	50	260
Total	.....	359	1,387
Average gain per steer	.....	59·9	231·1

LOSSES CAUSED BY DEHORNING.

	First month lbs.	Feeding period lbs.
Gains made by hornless Steers	59·9	231·1
Gains made by dehorned Steers	34·5	186·3
	25·4	44·8

While the loss of 44 pounds per beast from dehorning is some consideration, there is less danger of injury during that time from hooking, and in addition there is the increase in value when the animals are marketed.

SUMMARY

In conclusion it may be pointed out that the profits will depend:—

1. On the selection of good feeders at reasonable prices.
2. On the gains made during the feeding period.
3. On putting the animals into condition to grade well at time of marketing.
4. On selling at such a time as will permit securing as wide a spread as possible between buying and selling prices.
5. On handling in carload lots which is more profitable than handling fewer numbers.